

## V. TRANSPORTATION

The transportation network in the White Oak Master Plan area functions to serve both local traffic circulation and passage for traffic moving through the Master Plan area to destinations in the larger region. Generally, the White Oak Master Plan area network consists of three major through roads connecting the communities to each other and to the surrounding region and a network of residential streets that branch out into the adjoining neighborhoods. There are a limited number of street connections between neighborhoods and through roads.

For this Master Plan, future traffic was forecast and analyzed to determine what transportation improvements will be necessary in the future. Details regarding this analysis can be found in the *Transportation Report for the Eastern Montgomery County Master Plan Areas*. This Plan assumed the Intercounty Connector (ICC) alignment shown in the 1981 *Approved and Adopted Master Plan for Eastern Montgomery County Planning Area: Cloverly, Fairland, White Oak*. If this alignment is not selected, then this Plan and other master plans will be amended accordingly.

The current roadway network conditions in the White Oak Master Plan area are generally congested. Key intersections function at congested levels of service and the area-wide average for all roadway links is outside the acceptable limits for the current Annual Growth Policy (AGP). These conditions are due to a restricted roadway network, limited level of transit service and use, and development occurring in the surrounding region. It is anticipated that current congestion will increase and necessitate additional capacity. One important way to address this problem is to increase the use of alternative modes of travel such as transit, carpools, walking, and bicycling. This Plan recommends actions that increase the transportation options open to residents and improve overall circulation. It is understood that some of the recommendations will not occur within the 20-year life of this Plan.

This Plan recognizes that the concept from the 1981 Plan of establishing "transit serviceability" by increasing land use densities to support transit is no longer appropriate. Achieving the recommended balance between land use and transportation infrastructure will be difficult. Nevertheless, the White Oak area would achieve balance at build-out by implementing the zoning recommendations in this plan (which produce fewer trips than the 1981 Plan), building the proposed grade-separated interchange at US 29 and Stewart Lane, and improving transit service and complementary measures resulting in increased transit use.

The Transportation Plan in the White Oak Master Plan also recognizes that communities are truly "livable" when their residents can move easily among home, work, school, shopping, and recreation activities. Improvements to the roadway system can contribute to livability by providing safe, convenient, and attractive circulation to community destinations by all modes of transportation. Improved streetscape character will encourage pedestrian circulation, enhance adjacent properties, and contribute to the economic vitality of the community.

### TRANSPORTATION GOAL

**Improve the convenience and safety of all modes of travel within and through the White Oak Master Plan area. Improvements should enhance, not disrupt, neighbor-hood character.**

### TRANSIT SERVICE

A community can be greatly enhanced through transit coverage that allows people to reach destinations around the region without driving a car. Transit serves the White Oak Master Plan area by bus routes along its major highways — New Hampshire Avenue, US 29, and Randolph Road. These routes provide regional access via

the Silver Spring, Wheaton, and Fort Totten Metro stations and will link the White Oak Master Plan area to the Glenmont Metro station when it opens. Currently, the bus network focuses on transporting people to Silver Spring where they either work or transfer to Metrorail service to Washington D.C. or buses bound for Bethesda and other western County work locations. The importance of a transit link to Silver Spring will increase as the congestion on US 29 increases. In addition, there is an increasing amount of employment in other areas of the County that will drive the need for expanded cross-County transit service.

Another factor relating to transit use is accessibility. Many White Oak Master Plan area neighborhoods have winding roads ending in culs-de-sac, making them difficult to serve by transit. Transit centers, providing centrally located, pedestrian-friendly places to access transit vehicles, can provide White Oak Master Plan area neighborhoods with more convenient transit access. If demand reaches an appropriate level, local feeder bus routes connecting the neighborhoods to the transit centers may be feasible. Figure 21 on page 41 shows existing bus coverage in the White Oak Master Plan area.

#### **OBJECTIVE:**

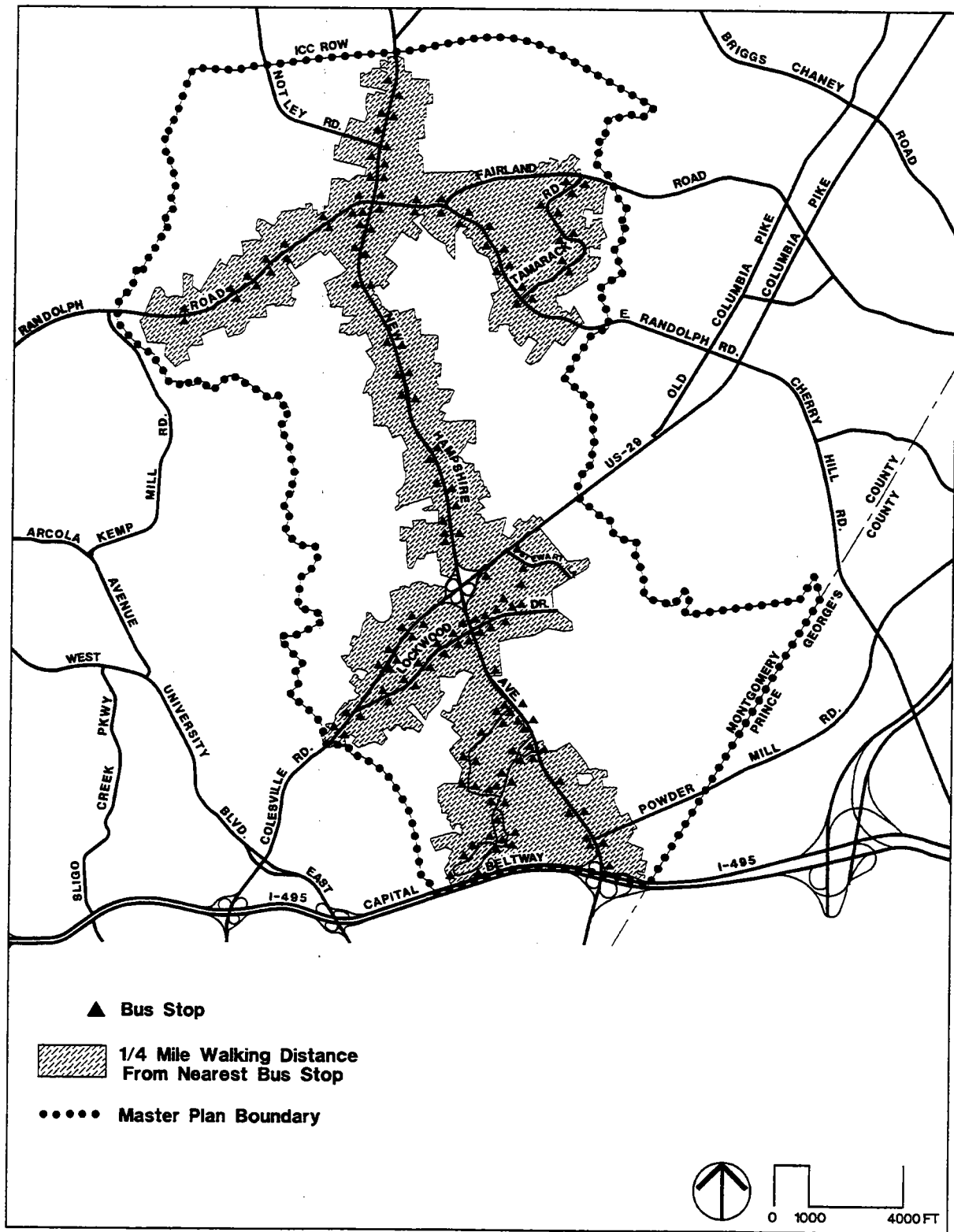
**Increase use of carpools and transit within and through the White Oak Master Plan area by providing services and facilities and establishing policies that encourage their use.**

#### **RECOMMENDATIONS:**

- Work toward a long-term solution for significantly improving transit along US 29. Based on current demand projections, a substantial improvement to transit should be provided between Burtonsville at MD 198 and the Silver Spring Metro station (future Silver Spring Transit Center). (A discussion of transit and US 29 is found in the *Transportation Report for the Eastern Montgomery County Master Plan Areas*.)
- Investigate the feasibility of a transit center in the White Oak Shopping Center. A transit center provides convenient access to bus routes and other transit for nearby residents, employees, and shoppers, thus forming part of Montgomery County's strategy to provide opportunities to use transit. The White Oak Shopping Center offers substantial potential for such a facility as it would provide convenient transfers between routes on US 29 and New Hampshire Avenue. Use of the center would also increase with major transit improvements along US 29. Waiting areas, commuter parking, and other amenities could be included, depending on the scale of the project. Special design treatments such as special paving and lighting, increased landscaping, benches, and other amenities to encourage use should also be considered.
- Support a transit center at Colesville if future demand warrants construction. The DPW&T has recently completed a study indicating that the current usage is not sufficient to justify the construction of a transit center in Colesville at this time. However, as the bus and transit network develops, it may be found to be worthwhile and feasible in the future. (See Land Use and Zoning Plan chapter, page 34.)
- Monitor, through a special study, the need to expand bus service in the White Oak Master Plan area to provide coverage for neighborhoods where residents must walk more than a quarter-mile to the nearest bus stop. (See Figure 21, page 41.)
- Monitor, through a special study, the demand for express bus routes between transit centers and areas of major employment within and outside the County. Transfer points should be identified at express route crossing points where people can easily transfer among express and local feeder routes.

# EXISTING BUS SERVICE COVERAGE AREA

FIGURE 21



- Remove the 1981 Master Plan recommendation for a park and ride lot and optional office development in the northeast quadrant of US 29 and New Hampshire Avenue. The White Oak Master Plan recommends this quadrant for single-family residential use (see page 48 and the Land Use and Zoning Plan chapter, page 22). The park and ride lot is more suited for the White Oak Shopping Center adjoining the recommended transit center. Bus routes are currently situated at the shopping center and a park and ride lot at the shopping center would allow people a convenient shopping trip on their way home. There is also a high concentration of garden and high-rise apartments within walking distance of the shopping center.
- Provide bus shelters and trash receptacles at all commercial centers and in residential areas that meet Division of Transit Services guidelines for minimum boarding and alighting. Landscaping is encouraged, where possible, to improve the users' experience while waiting for a bus and to enhance streetscape character.
- Improve access to transit by providing sidewalks leading to and along roadways served by transit. As mentioned, many White Oak Master Plan area neighborhoods are difficult to reach by bus. However, there are opportunities to improve pedestrian connections to the nearest bus stops by improving sidewalks and by constructing paths on unused rights-of-way. (See Pedestrian Circulation, page 54.)

## **TRANSPORTATION DEMAND MANAGEMENT**

### **OBJECTIVE:**

**Manage transportation demand to achieve better system efficiency and reduce traffic generated by new and existing development under certain conditions.**

### **RECOMMENDATIONS:**

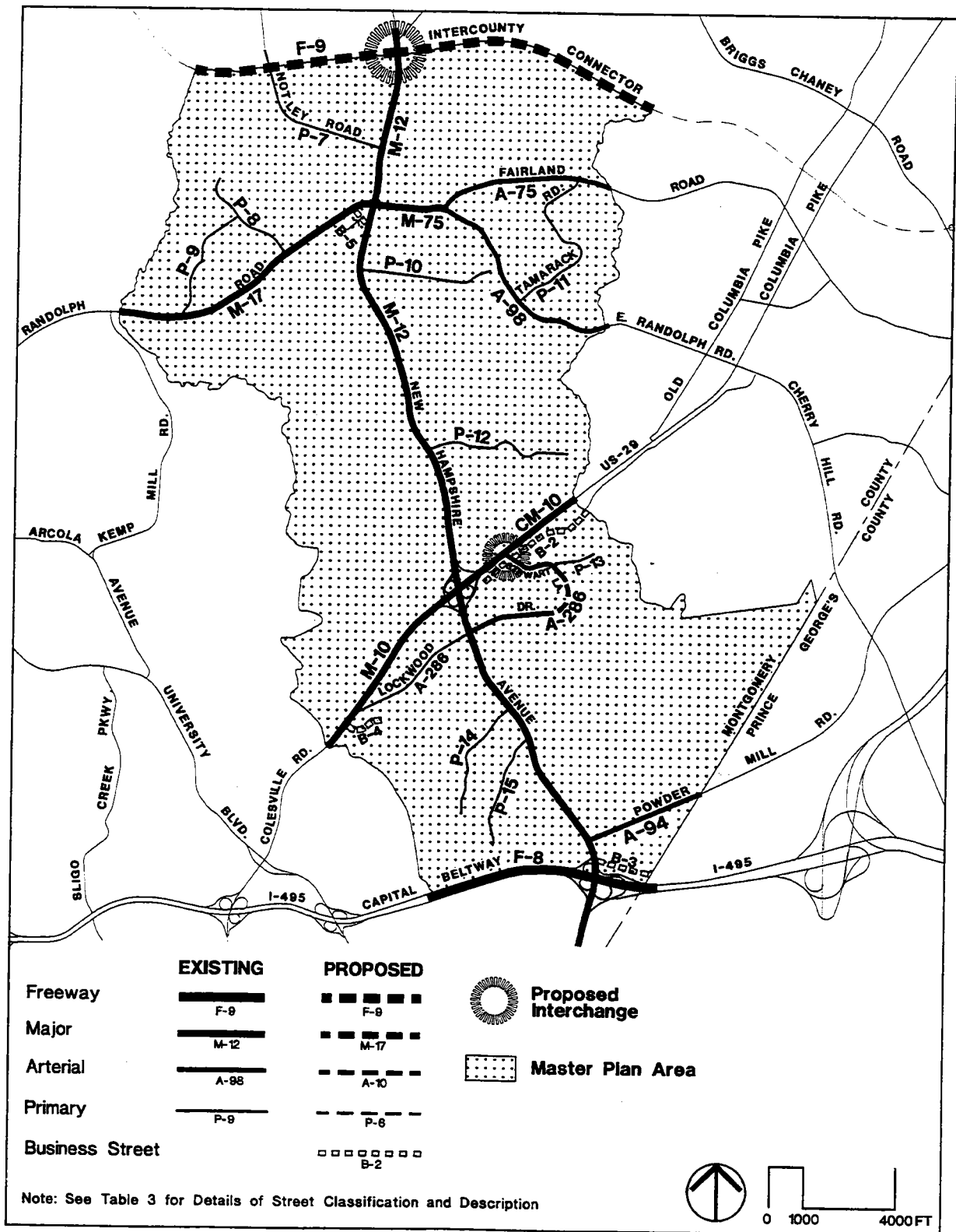
- Develop a Transportation Demand Management Program (TDM) to provide coordination, monitoring, and perhaps some programs for residents of the area and for patrons and employees of the commercial establishments in the eastern Montgomery County area. Monitoring will include both the use of ridesharing and traffic conditions at the key intersections and interchanges discussed in the US 29 section of this Plan. (See Road Network section—US 29.) The TDM could be much less extensive than the one currently used in the Silver Spring CBD and could make use of current resources such as the programs now provided by West\*Farm under an agreement with the DPW&T.

The TDM could be a voluntary public/private partnership including State Highway Administration (SHA), DPW&T, employers, and civic associations in the US 29 area. The geographic extent of the TDM should extend to the Silver Spring policy area. Goals should include the following:

- Coordinate with the Silver Spring Central Business District program.
- Develop alternatives to single-occupancy vehicles during construction of segments of US 29.
- Promote the use of transit and ridesharing among employees and residents in the US 29 area.
- Coordinate park and ride lots and bus service.
- Monitor all trip mitigation programs on a periodic basis to evaluate effectiveness.

# STREET AND HIGHWAY PLAN

FIGURE 22



## ROAD NETWORK

The recommendations below address present and future traffic congestion problems in the White Oak Master Plan area. Recommendations consist of road improvements and classification changes to reflect the role each road will play in the future network. The classification changes will also allow improved streetscape character of major roadways when development occurs or road improvements are made. Where possible, improvements will help the movement of pedestrians and bicycles as well as motorized vehicles.

Figure 22 on page 43 identifies the White Oak Master Plan roadways on the Master Plan of Highways and Table 3 on page 51 lists their classifications with minimum rights-of-way. The classification of roadways is a way of indicating the degree to which access to properties is balanced with the ability to handle through traffic. The system ranges from Freeways with an emphasis on through traffic capacity and little or no direct property access down to the Primary Residential Street which emphasizes access functions, which may affect the efficiency of through traffic movement. Secondary residential roads are not shown on the *Master Plan of Highways*. The roadway classes are detailed in the *Transportation Report for the Eastern Montgomery County Master Plan Areas* and in the following list:

<b>Freeways</b>	Provide for movement of vehicles at high speed over significant distances. Access is limited to grade-separated interchanges.
<b>Major Highways</b>	Provide less speed and mobility, but more access at intersections.
<b>Arterial Roads</b>	Connect major highways and provide more access points while moving traffic at lower speeds. Typically, more than half of the traffic on an arterial is "through" traffic.
<b>Commercial Business District Streets</b>	Are restricted to commercial areas, provide on-street parking, more pedestrian space, and more access points to stores and offices.
<b>Primary residential streets</b>	May carry some through traffic but their main purpose is to provide access for 200 or more households and to connect to arterial roads.
<b>Secondary or tertiary residential streets</b>	Provide direct access to homes and allow for the possibility of traffic management measures to discourage through traffic movements and speeding. (These are not listed in master plans.)

The following projects are under way as this Master Plan is being developed.

- The ICC is a planned limited-access transportation facility linking US 1 in Prince George's County with I-370 and the I-270 Corridor in Gaithersburg. Federal permitting processes require a detailed Environmental Impact Statement, consideration of alternative alignments, and the determination of a preferred alignment and design. Seven alternative alignments are being considered for the facility.
- The Maryland State Highway Administration (SHA) and Montgomery County Department of Public Works and Transportation (DPW&T) project to widen New Hampshire Avenue north of Randolph Road will provide a six-lane divided road between Randolph Road and the ICC right-of-way.
- The DPW&T project on East Randolph Road Phase II will provide a five-lane road between Fairland Road and Old Columbia Pike, with a four-lane bridge over Paint Branch.

## **OBJECTIVE:**

**Provide an inter-connected network of roadways that allows safe and efficient movement of local and through traffic.**

## **RECOMMENDATIONS:**

### **Major Highways**

#### **US 29 (Columbia Pike)**

US 29 is the major north-south transportation facility in the eastern part of the County. In Eastern Montgomery County it is a major conduit to the Capital Beltway (I-495) and Washington, D.C. US 29 parallels I-95 in Prince George's County and connects Fairland south to White Oak, Silver Spring, I-495 (Capital Beltway), and the District of Columbia, and north to Howard County. US 29 is part of the National Highway System (NHS).

Most intersections along US 29 are forecast to continue to experience high levels of congestion. The State Highway Administration (SHA) has proposed a series of intersection improvements on US 29 between University Boulevard (MD 193) and the County line. There will not be sufficient funding to construct all improvements at once. Certain improvements will be more urgently needed or more effective than others. It is important to develop an incremental approach that will maximize the benefit from public investment. One way to ensure this is through monitoring the effects of each improvement on traffic patterns, particularly downstream and upstream of each improvement.

Analysis shows that some of the proposed grade-separation improvements will somewhat relieve congestion on US 29 as well as on parallel and east-west roads and will also aid in providing safe pedestrian crossings. These improvements may, however, have negative impacts downstream and upstream. It is impossible to predict accurately this complex interaction and only experience will tell.

Improvements to US 29 should provide six general purpose lanes plus acceleration and deceleration lanes, with four lanes crossing the Patuxent River to the Howard County line, and should minimize impacts south of New Hampshire Avenue where grade separations may not be feasible. Grade separations north of New Hampshire Avenue are also intended to improve east-west crossings for vehicles and provide the communities, particularly pedestrians and bicyclists, better access to public facilities and commercial centers located on both sides of US 29.

The following recommendations for grade separations make two assumptions: that congestion will continue to exist south of New Hampshire Avenue and that already planned improvements will be constructed.

- Add grade-separated interchanges to the *Master Plan of Highways* with the following construction priority:
  - MD 198/Dustin Road
  - Briggs Chaney Road
  - Randolph Road
  - Tech Road/Industrial Parkway
  - Stewart Lane
  - Musgrove Road/Fairland Road
  - Blackburn Road/Greencastle Road

- Monitor the net effects of completing each grade-separation for adverse impacts on upstream and downstream intersections as well as for east-west circulation as compared to the expected operational improvements. Monitoring may change the priorities, the cost effectiveness of the improvements, or whether other grade-separations should be constructed at all.
- Reserve right-of-way through this master planning process for all improvements to provide the greatest flexibility for future roadway and transit needs.
- Evaluate bus service to see if it alleviates some of the predicted congestion.
- Include bikeways and sidewalks in the design of all bridges over US 29.
- For the individual grade-separated interchanges, *consider the following recommendation:*

#### **Stewart Lane Interchange**

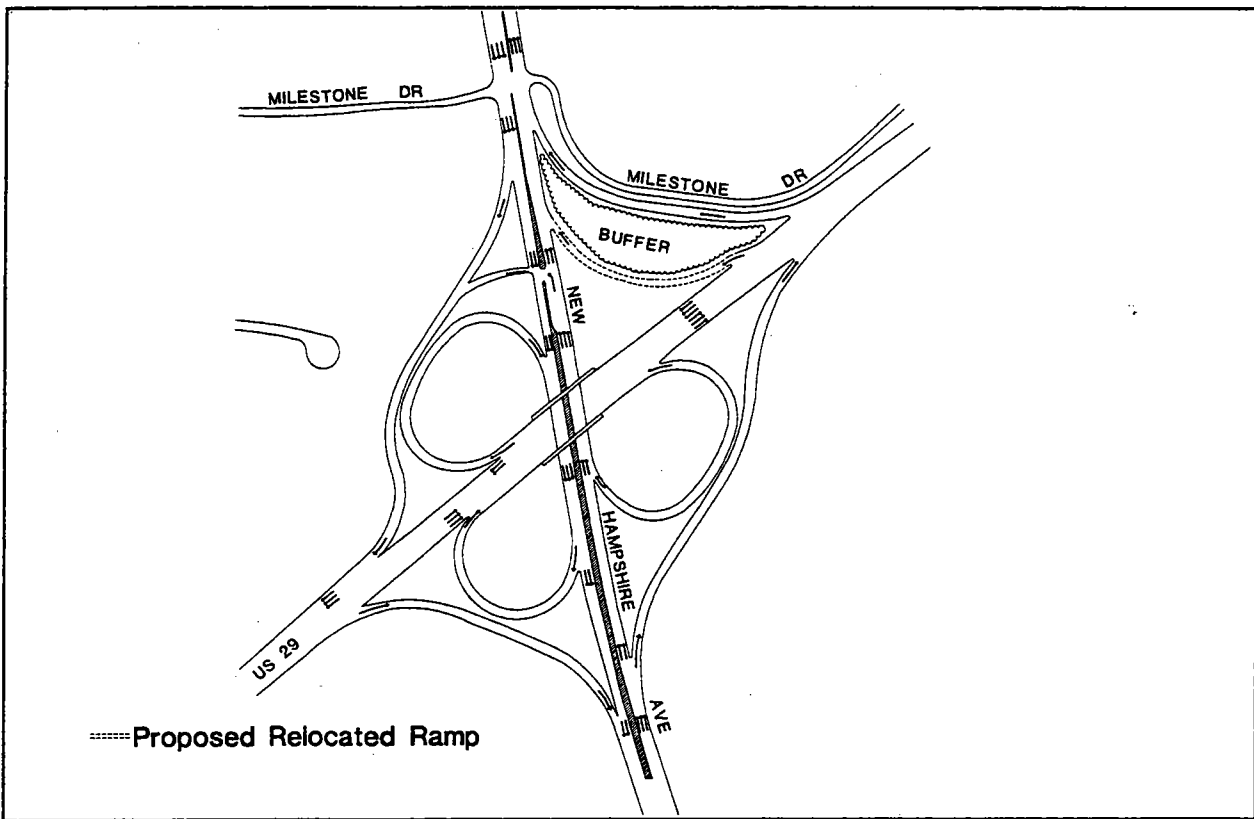
SHA should evaluate a design for the grade-separation of US 29 and Stewart Lane that would involve less right-of-way acquisition on the north and south sides of US 29. This alternative would entail a frontage road system or parallel access road on both sides of US 29 that would use Milestone Drive and Old Columbia Pike. Slip ramps could then be introduced at locations along US 29 to access the frontage road and Stewart Lane. Although this alternative would require less right-of-way, there could be operational issues that would need further study.

- Support the need for a grade-separated interchange at US 29 and Stewart Lane that was identified as part of the SHA's US 29 Project Planning Study. The future interchange should be designed and constructed in a manner that has minimal impact on adjacent properties while relieving anticipated congestion at this intersection. A major benefit for residents will be better access across US 29. To safely allow such access, it is recommended that SHA provide adequate sidewalks and bikeway facilities in the interchange area.

#### **New Hampshire Avenue**

- Study the potential to widen New Hampshire Avenue from four lanes to six lanes at the US 29 interchange. This is the only section of New Hampshire Avenue that is not six lanes and should be considered for widening if found to be economically feasible.
- Reconstruct the existing off-ramp in the northeast quadrant of the US 29/New Hampshire Avenue interchange to shift it closer to the interchange. A possible configuration is shown in Figure 23.
- Maintain highway classification for major highways within Commercial Centers but allow for lower design speeds that are compatible with the need for local access and pedestrian-friendly design standards. Such standards include street trees, wider sidewalks, tighter corner turning radii, and safer pedestrian crossings. These improvements will strengthen the overall viability of the centers and enhance the aesthetic character of the community. When major highways pass through existing commercial centers served by transit, a greater emphasis upon pedestrian access and streetscape character is needed. The intent is not to reduce capacity but to ensure an attractive and safe pedestrian environment and more orderly access to local shopping.





**Arterial Roads**

**Stewart Lane-Lockwood Drive**

- Provide the Lockwood Drive extension to connect the existing ends of Stewart Lane and Lockwood Drive as soon as possible. This connection was a condition placed on the developer at the time of site plan approval in 1986 and is needed for the residents of the several thousand multi-family dwelling units.
- Reclassify the Lockwood Drive extension to Stewart Lane as an arterial road. An adequate connector is needed to provide an alternate exit and entry for residents of the area as well as emergency vehicles. A connector is also needed to allow better bus service to the northeastern portion of the area. Traffic forecasts indicate that two lanes of travel will be sufficient. The existing portions of Stewart Lane and Lockwood Drive, that the new segment will join, are classified as arterial. To remain consistent, the addition should be an arterial. The available 70-foot right-of-way is substandard for an arterial, but will allow for two lanes of traffic with a bikeway and sidewalk.

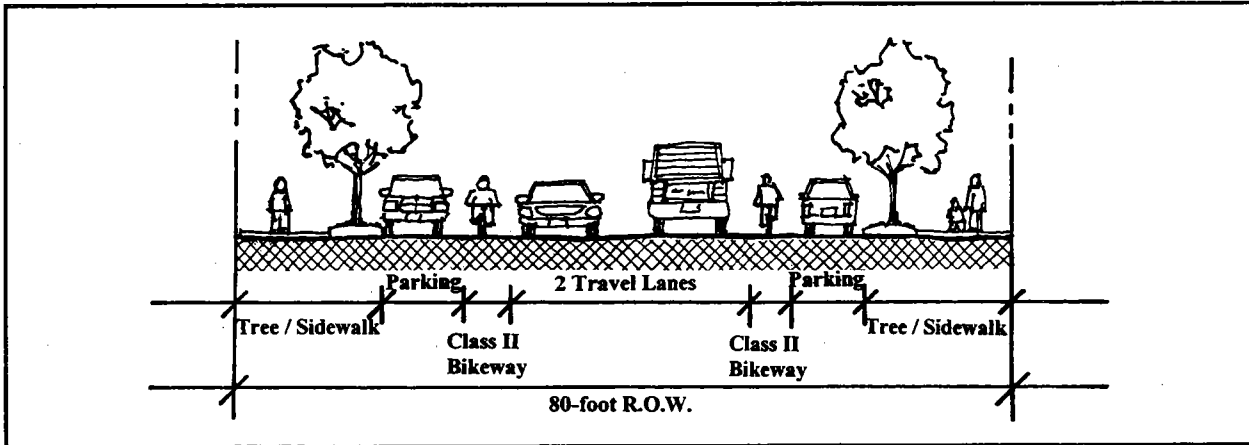
**Lockwood Drive**

- Reaffirm classification of Lockwood Drive between US 29 and a point 400 feet west of New Hampshire Avenue as an arterial road with a 2-lane closed section cross-section. The Plan recognizes that this roadway currently provides local access to existing residential neighborhoods

as well as a traffic connection between US 29 and New Hampshire Avenue. Traffic forecasts indicate that a two-lane street will be adequate over the life of the Master Plan. This Plan recommends an arterial road cross-section that will allow for two lanes of traffic, on-street parking, sidewalks, and either a Class I or Class II bikeway within an 80-foot closed section cross-section that is compatible with the community. This section of Lockwood Drive should be designed with features to enhance pedestrian crossings and movement. Such features could include collars at intersections, alternating parking, or other design aspects that are deemed appropriate. The purpose is not to constrict vehicle movements, but to provide an increased level of pedestrian safety and convenience.

Lockwood Drive Closed Section Arterial

Figure 24



**Commercial Business District Streets**

- Improve Vital Way as a two-lane Commercial Business District Street between Randolph Road and New Hampshire Avenue. Provide on-street parking spaces and distinctive treatment to emphasize pedestrian crossings. In the future, this street should not function as a through street for vehicles traveling from eastbound Randolph Road to southbound New Hampshire Avenue since the exclusive right-turn lane will more appropriately accommodate the same movement. Vital Way is intended to function as a local street serving adjacent commercial areas. The recommended improvements should help local traffic and pedestrian access and encourage property owners to redevelop or improve their properties. (See Figure 25, page 50.)

**Miscellaneous Road Improvements**

- Recommend a network of two-lane secondary residential roads within the Milestone Drive property that allows access to the property from both New Hampshire Avenue and US 29. The park and ride lot and optional office development previously recommended for this site have been removed. (See page 42 and the Land Use and Zoning Plan chapter, page 22.) The roadways within the neighborhood should have sufficient right-of-way for sidewalks, street trees, and a Class II bikeway on the principal roadway serving the neighborhood, and should discourage cut-through traffic.
- Do not rebuild the bridge on Old Columbia Pike over the Paint Branch. The existing bridge over Paint Branch is unfit for automobile use. The 1981 *Eastern Montgomery County Master Plan* recommends rebuilding the bridge for automobiles to provide an additional crossing over Paint

Branch as well as improved access for the residents of the area just southwest of the Paint Branch. This Master Plan recommends that this portion of Old Columbia Pike be reserved for pedestrian and bicycle use. Forecasts indicate that opening of the bridge to vehicular traffic would not relieve the congestion on US 29, and the new interchange at Stewart Lane will benefit residents east of US 29.

## **INTERSECTION IMPROVEMENTS**

Three intersections along New Hampshire Avenue have been identified as having forecasted congestion or safety problems. These intersections are New Hampshire Avenue at: 1) Lockwood Drive, 2) Powder Mill Drive, and 3) Randolph Road. Improvements to these intersections should be considered by the SHA and DPW&T in consultation with the community. In addition, this Plan recommends that intersection improvements be considered by the SHA and DPW&T along all major highways in the Master Plan area to improve pedestrian circulation.

### **OBJECTIVE:**

**Where possible, improve intersections that are forecast to have serious congestion or safety problems.**

### **RECOMMENDATIONS:**

- Evaluate key intersections along New Hampshire Avenue to reduce projected traffic congestion. Changes should be evaluated based on their impact to pedestrian movement, the potential for new or additional cut-through traffic impact to adjacent neighborhoods, and overall traffic congestion. The SHA and DPW&T should review any recommended changes with the affected neighborhoods.
- Evaluate the future need for a traffic signal at Randolph Road and Vital Way. This Plan recommends that the Vital Way or the shopping center entrance on the north side of Randolph Road be realigned to create a normal intersection configuration. Currently, pedestrians and bicyclists have difficulty crossing Randolph Road at Vital Way. This Plan recommends that properties along Vital Way be redeveloped and that the street be reconstructed as a two-lane Commercial Business District Street from Randolph Road to New Hampshire Avenue. The redevelopment may result in circulation and pedestrian conflicts to a point where a signal may be warranted. These two improvements should also help remove local vehicular circulation between shopping areas from the congested intersection of Randolph Road and New Hampshire Avenue and eliminate some of the need to make U-turns.

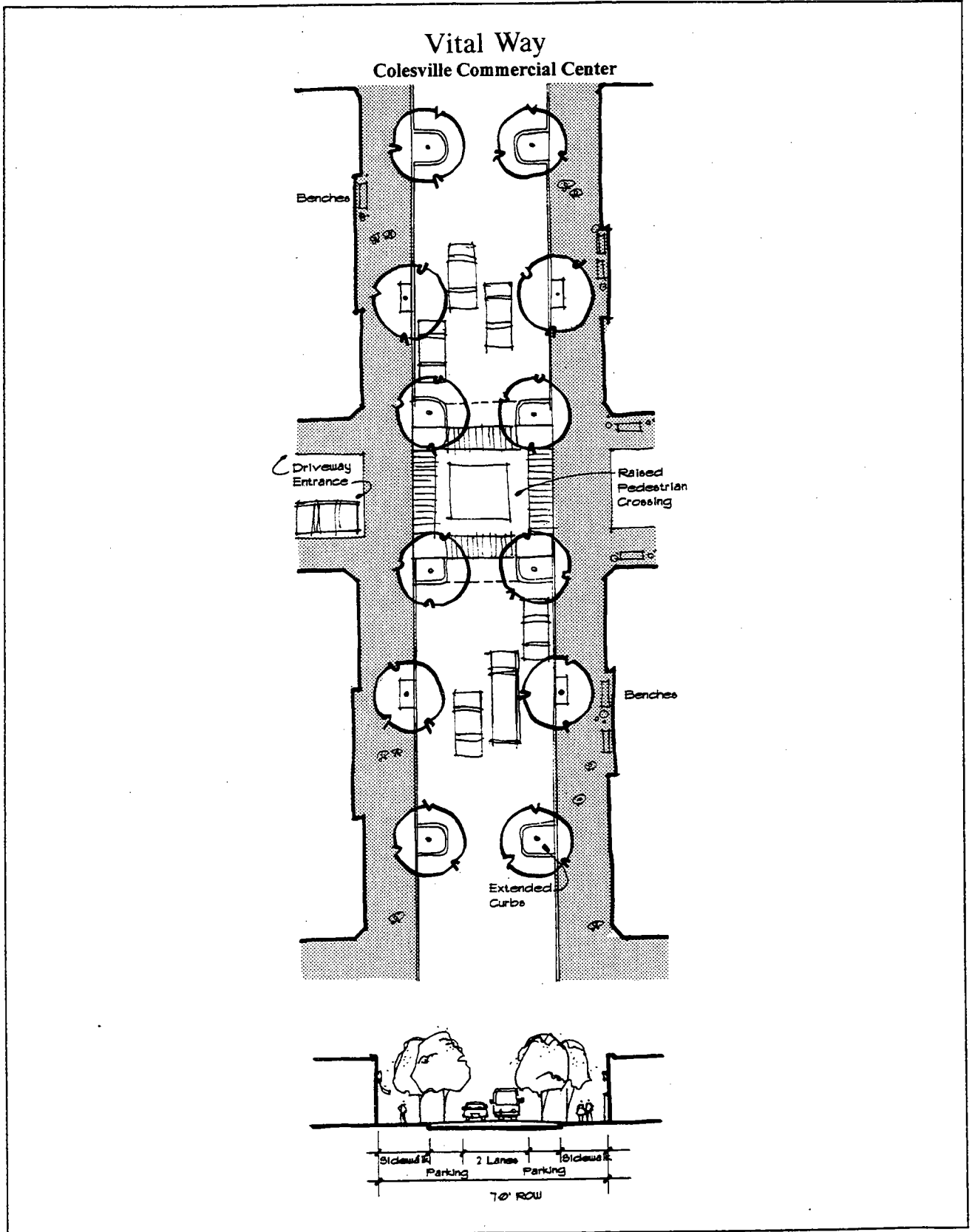


Table 3

## ROADWAY CLASSIFICATIONS

Master Plan Roadway Designation	Name	Limit	Minimum Right-of- Way	Recom- mended Number of Lanes*	Recommendations/ Status
<b>Freeways</b>					
F-8	<b>Capital Beltway (I-495)</b>	Northwest Branch to Prince George's County line	300'	10 divided	Existing
F-9	<b>Intercounty Connector (ICC)</b>	Northwest Branch to Paint Branch	300'	To be determined	SHA Environmental Study underway
<b>Major Highways</b>					
CM-10	<b>Columbia Pike (US 29)</b>	New Hampshire Avenue to Paint Branch	200'	6 divided	Existing controlled major highway with proposed interchange at Stewart Lane
M-10	<b>Columbia Pike (US 29)</b>	Northwest Branch to New Hampshire Avenue	120'	6 divided	Sidewalk improvements recommended
M-12	<b>New Hampshire Avenue (MD 650)</b>	Capital Beltway to ICC	120'	6 divided	Widening to six lanes divided highway under construction between Randolph Road and ICC. Sidewalk improvements recommended entire length
M-17	<b>Randolph Road</b>	Northwest Branch to New Hampshire Avenue	120'	6 divided	Existing
M-75	<b>East Randolph Road</b>	New Hampshire Avenue to Fairland Road	120'	6 divided	Existing
<b>Arterials</b>					
A-75	<b>Fairland Road</b>	East Randolph Road to Paint Branch	80'	4	Existing 2 lanes Sidewalk improvements recommended
A-94	<b>Powder Mill Road</b>	New Hampshire Avenue to Prince George's County line	80'	4	Sidewalk and bikeway improvements recommended
A-98	<b>East Randolph Road</b>	Fairland Road to Paint Branch	80'	4-5	Five lanes (four through lanes with center turning lane); four lanes at Paint Branch Bridge (under construction)
A-286	<b>Lockwood Drive (MD 895)</b>	US 29 to 400 feet west of New Hampshire Avenue	80'	2	Closed section with sidewalks, on-street parking, and Class I or II bikeway
A-286	<b>Lockwood Drive</b>	400 feet west of New Hampshire Avenue to the east side of the White Oak Shopping Center	80'	2	Sidewalk improvements recommended
A-286	<b>Lockwood Drive</b>	East side of the White Oak Shopping Center to Lockwood Drive extended	80'	2	2 lanes existing, bikeway proposed

Master Plan Roadway Designation	Name	Limit	Minimum Right-of-Way	Recommended Number of Lanes**	Recommendations/Status
A-286	Lockwood Drive extended	Lockwood Drive to Existing Stewart Lane	70'	2	Two lanes, with sidewalk and bikeway proposed
A-286	Stewart Lane	Lockwood Drive extended to US 29	80'	2	Recommended grade-separated interchange at US 29 should provide pedestrian and bicycle connection
<b>Commercial Business District Streets</b>					
B-2	Old Columbia Pike	White Oak Shopping Center to Paint Branch	80'	2	Sidewalk improvements recommended
B-3	Elton Road	New Hampshire Avenue to Prince George's County line	80'	4	Existing
B-4	Hillwood Drive	US 29 to 500 feet east	80'	4	Existing
B-5	Vital Way	Randolph Road to New Hampshire Avenue	70'	2	Implement streetscape improvements, including curb, sidewalk, and street trees
<b>Primary Residential Roads</b>					
P-7	Notley Road	New Hampshire Avenue to ICC right-of-way	70'	2	Sidewalk improvements recommended
P-8	Locksley Lane	Randolph Road to Beaumont Road	70'	2	Sidewalk improvements recommended
P-9	Hawkesbury Lane	Randolph Road to Locksley Lane	70'	2	Sidewalk improvements recommended
P-10	Cannon Road	New Hampshire Avenue to Broadmore Road	70'	2	Existing
P-11	Tamarack Road	East Randolph Road to Fairland Road	70'	2	Existing
P-12	Jackson Road	New Hampshire Avenue to Paint Branch Park	70'	2	Bikeway and Sidewalk improvements recommended
P-13	April Lane	Stewart Lane to .3 mi. east	70'	2	Existing
P-14	Schindler Drive	Crest Park Drive to New Hampshire Avenue	70'	2	Existing
P-15	Cresthaven Drive	Devere Drive to New Hampshire Avenue	70'	2	Existing

\* These are the number of planned through travel lanes for each segment, not including lanes for turning, parking, acceleration, deceleration, or other purposes auxiliary to through travel.

## **STREETSCAPE IMPROVEMENTS**

Streetscape improvements enhance and strengthen community identity, pedestrian circulation, and visual character. This Plan recommends streetscape improvements within the commercial centers and along the major highways of the White Oak Master Plan area. (See Figure 26, page 56.) Recommendations within the commercial centers will be achieved by capital improvements for Vital Way and Lockwood Drive.

Within the commercial centers, streetscape improvements will help strengthen the economic vitality of these areas through improving pedestrian access to destinations and transit, increasing on-street parking, and improving circulation. Improvements also will upgrade visual character by screening overhead utility lines and expansive parking areas.

Along highly traveled roadways such as US 29, New Hampshire Avenue, and Randolph Road, streetscape improvements are needed to strengthen their residential character and improve pedestrian access to transit. New Hampshire Avenue in particular should be a priority for streetscape improvements because it is the north-south thoroughway within the White Oak Master Plan area and highly used by the community. US 29 should also be a priority in order to buffer adjacent residential communities from the roadway.

A transition in land use such as the beginning of a commercial center or the crossing of a stream valley establishes gateways. At gateway locations, the streetscape should emphasize the change in character and accent the entry into specific areas.

### **OBJECTIVE:**

**Provide streetscape improvements to strengthen the vitality of adjoining commercial areas, enhance community identity and pedestrian circulation, and improve the roadway experience in general.**

### **GUIDELINES:**

- Within the commercial centers, improve existing streetscapes by planting tightly spaced street trees, and providing sidewalks and new attractive street lighting. Overhead utilities should be screened or relocated underground, if feasible. Additional pedestrian amenities such as bus shelters, benches, and trash receptacles should be included where appropriate. Such improvements should occur within the right-of-way or, when necessary, on adjacent property within easements. Locate street trees adjacent to the curb where right-of-way permits.
- Within residential areas along New Hampshire Avenue and Randolph Road, reinforce the residential character by planting tall-growing, deciduous shade trees and improving sidewalk access to the surrounding neighborhoods. Such improvements should occur within the right-of-way or, when necessary, on adjacent property within easements.
- Along US 29, outside of the commercial centers, improve compatibility with adjacent residential neighborhoods by heavily buffering with plantings. Plant material should be primarily native plants arranged in natural groupings to reinforce the regional character. Heavily plant existing and proposed US 29 interchanges in order to minimize impact upon adjacent development. Reinforce the regional character by using primarily native plant material in naturalized groupings.
- At gateway locations to the Master Plan area, streetscape improvements should accent the sense of entry by planting a line of White Oaks in the median or by reinforcing the natural landscaping. (See Figure 26.) At gateways to commercial areas, the contrast between the recommended streetscape

improvements to the commercial areas and the residential streetscape treatments recommended outside the commercial centers will accent the change. (See Figures 15, 27, 19, and 20.)

## PEDESTRIAN CIRCULATION

Sidewalks are important to pedestrian circulation as they provide safe access to destinations and encourage the use of transit. Pedestrian safety is of particular importance where stream valley park trails cross heavily travelled roads. This Plan recommends a desirable sidewalk circulation network that links existing community facilities, shopping centers, and neighborhoods. Because of the developed nature of the White Oak Master Plan area, it is recognized that this network will require additional analysis during design and implementation and special attention to the retention of significant landscaping and structures in the public right-of-way.

These recommendations are not an exhaustive list. Communities may request sidewalks from the DPW&T, which is responsible for locating and designing sidewalks through its sidewalk program. DPW&T, as part of its preliminary engineering evaluation of a sidewalk request, analyzes potential sidewalk locations along proposed sidewalk routes for environmental constraints, neighborhood impact, and community support. Communities and neighborhoods interested in pursuing sidewalk construction should contact the DPW&T for the Sidewalk Request Guidelines. The following recommendations address the specific issues within the Master Plan area. This Plan is not intended to preclude consideration of other sidewalk locations that may be identified in the future. (Table 4, page 57.)

### OBJECTIVE:

**Enable pedestrians to safely and easily reach bus stops or community facilities and improve safety for pedestrians crossing main roads in the White Oak Master Plan area.**

### RECOMMENDATIONS:

- Improve pedestrian access to local transit by providing sidewalks leading to and along roads served by transit and crosswalks at transit stops.
- Build pedestrian walkways where appropriate with community approval on paper streets to enhance the network of pedestrian ways and to improve access to transit. The 1981 *Eastern Montgomery County Master Plan* reserves rights-of-way for several unbuilt ("paper") streets. This Plan recommends using some of the rights-of-way for walkways rather than residential streets.
- Construct sidewalks in existing residential neighborhoods using innovative construction techniques that are sensitive to existing conditions and character of the neighborhood.
- SHA and DPW&T should study relocating the pedestrian-activated signal and crosswalk at Jackson Road and New Hampshire Avenue to the north side of the intersection. Pedestrians coming from the White Oak Middle School, Jackson Road Elementary School, or the Martin Luther King, Jr. Recreational Park should be encouraged to walk along the north side of Jackson Road to minimize the need to cross Jackson Road.
- Implement a safe and convenient pedestrian and bikeway connection between the Valley Mill and Pilgrim Hill parks at East Randolph Road. This bikeway connection is an integral part of the County-wide bikeway network. The County-wide network should be continuous. Currently, the DPW&T is finalizing plans for the reconstruction of East Randolph Road at this location. This safe and convenient crossing should be incorporated into the DPW&T plans. The DPW&T is currently working on a design that will improve the access points to both Valley Mill & Pilgrim Hill Parks. The



current design shows the drives to both parks realigned to provide a more normal intersection. In addition, the DPW&T is preparing engineering plans that incorporate a bike/pedestrian underpass that will provide for a continuous trail along the Paint Branch stream valley.

- Pursue an easement for pedestrian access between the FDA center (NSWC) and the White Oak Commercial Center. The easement should be located in the vicinity of the eastern access drive to the White Oak Shopping Center and the White Oak Gardens Apartments. The easement should be sensitive to the surrounding existing uses and provide a pleasant and desirable experience for all who use it.
- Monitor pedestrian crossing of Columbia Pike (US 29) at the Burnt Mills Center. Currently, there is a rustic hiking trail along the Northwest Branch stream valley that ends on both sides at Columbia Pike. Recommendations in this Plan for the Northwest Branch Stream Valley Park and community use of the WSSC building on the east side of Columbia Pike may increase pedestrian traffic crossing at this point. Any study or planned pedestrian improvement also should take into consideration the continuity of the trail system and pedestrian crossings occurring to the northeast of the stream between the properties owned by Manor Care, Inc. as well. (See Community Facilities Chapter, page 69.)

# STREETSCAPE IMPROVEMENTS

FIGURE 26

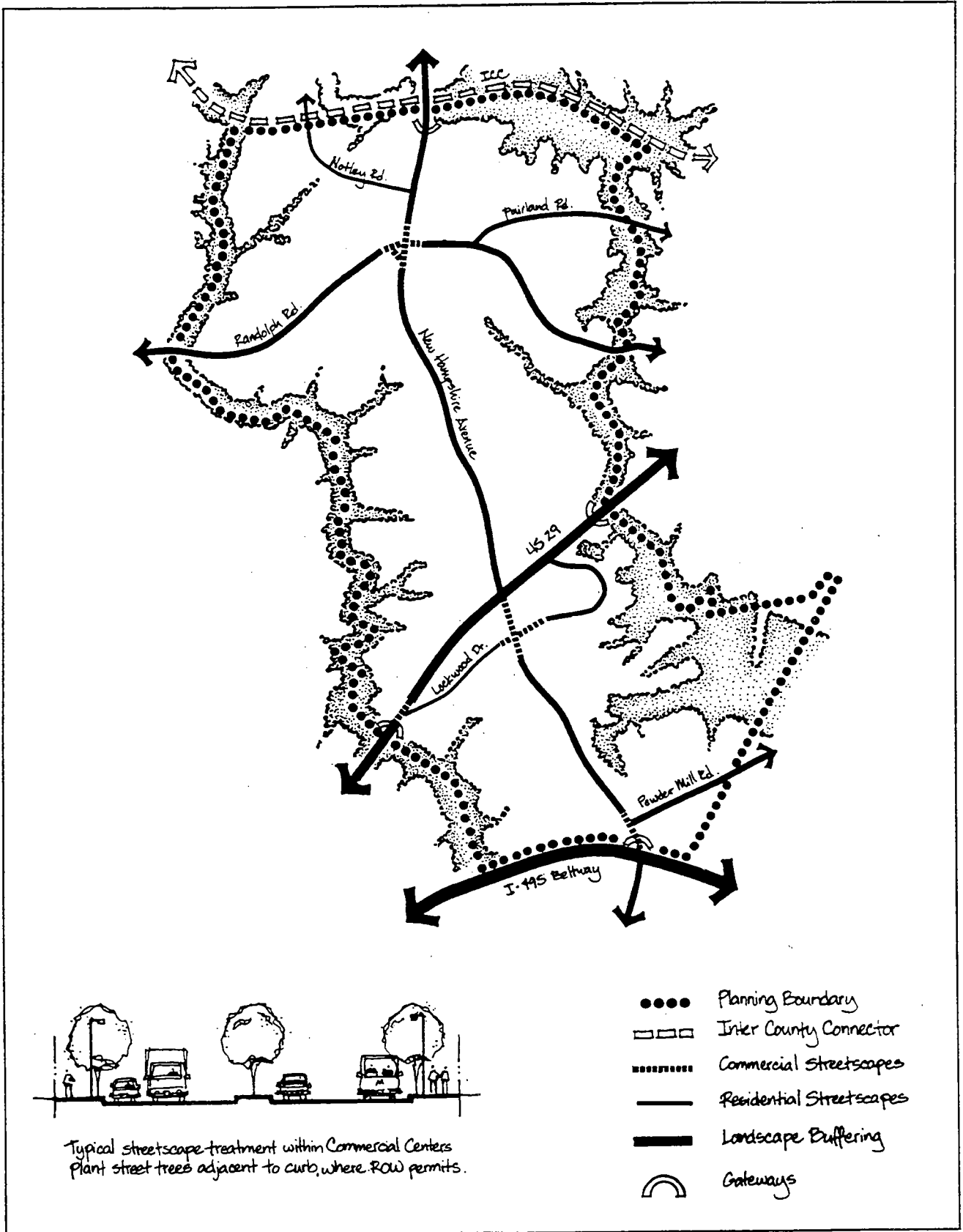


Table 4

**PEDESTRIAN IMPROVEMENTS RECOMMENDED FOR CONSIDERATION IN WHITE OAK**

<b>STREET</b>	<b>LIMITS</b>	<b>LENGTH (LINEAR FEET)</b>	<b>COMMENTS*</b>
Brantford Avenue	New Hampshire Avenue to Sandalwood Lane	1,500	Sidewalk on one side
Sandalwood Lane	Brantford Avenue to White Oak Middle School property boundary	300	Sidewalk on one side
Lima Drive	Downs Drive to White Oak Middle School property boundary	1,900	Sidewalk on both sides
Venice Drive	Existing sidewalk to Martin Luther King, Jr. Recreational Park	900	Extend sidewalk on both sides
Eastbourne Drive	Existing sidewalk to the Martin Luther King, Jr. Recreational Park	300	Extend existing sidewalk on both sides
Downs Drive	Montclair Drive to Martin Luther King, Jr. Recreational Park	2,100	Sidewalk on both sides
Venice Place	Venice Drive to Downs Drive	400	Sidewalk on one side
Downs Drive	Venice Place to Lima Drive	300	Sidewalk on one side
Winhall Way	Pine Street (paper street) to Eastbourne Drive	1,000	Sidewalk on one side
Jackson Road	New Hampshire Ave. to Martin Luther King, Jr. Recreational Park	2,400	Sidewalk on south side, pedestrian bikepath on north side
Renick Lane	Jackson Road to Tracy Drive	1,650	Sidewalk on one side
Tracy Drive	Renick Lane to New Hampshire Avenue	650	Sidewalk on one side
Tanley Road	New Hampshire Avenue to Sarah Drive	2,700	Sidewalk on one side
Kerwood Road	Jackson Road to Martin Luther King, Jr. Recreational Park	1,200	Sidewalk on one side
Notley Road	Cloverly Master Plan boundary to New Hampshire Avenue	4,000	Sidewalk on one side
Locksley Lane	Westover Elementary School to Randolph Road	1,700	Sidewalk on one side
Hawkesbury Lane	Doral Development to Locksley Lane	3,000	Extend sidewalk on both sides
Vital Way	Randolph Road to New Hampshire Avenue	500	Sidewalk on southwest side; extend sidewalk in front of corner lot on Randolph Road and Vital Way
Randolph Road	Existing sidewalk to New Hampshire Avenue	Under 100	Sidewalk on south side
New Hampshire Avenue	Existing sidewalk north of the Naval Surface Warfare Center to Hillandale Fire Station #12	3,200	Extend sidewalk on east side
New Hampshire Avenue	Tanley Road to Milestone Drive	2,250	Sidewalk on west side
Powder Mill Road	New Hampshire Avenue to Prince George's County line	5,200	Sidewalk on both sides
Lockwood Drive	Colesville Road to New Hampshire Avenue	2,700	Sidewalk on one side
La Grande Road	Schindler Drive to Cresthaven Drive	900	Sidewalk on one side
Eldrid Drive	Eldrid Place to Buccaneer Road	6,100	Sidewalk on one side, through Meadowood Park on paper street right-of-way

STREET	LIMITS	LENGTH (LINEAR FEET)	COMMENTS*
Buccaneer Court	Buccaneer Road to end of cul-de-sac	250	Sidewalk on one side connecting to path from Cannon Road Elem. School
Springtree Drive	Randolph Road to Springloch Road	600	Sidewalk on one side
Springloch Road	Springtree Drive to Eldrid Place	950	Sidewalk on one side
Eldrid Place	Springloch Road to Eldrid Drive	450	Sidewalk on one side
Old Columbia Pike	Paint Branch to White Oak Shopping Center	3,800	Sidewalk on one side
Burnt Mills Avenue	US 29 to McCeney Avenue	1,000	Sidewalk on one side
Burnt Mills Avenue	McCeney Avenue to Gatewood Avenue	1,300	Sidewalk on one side
Gatewood Avenue	McCeney Avenue to Schindler Drive	1,000	Sidewalk on one side
Broadmore Road	Broadmore Hills existing sidewalk to Cannon Road	300	Sidewalk on east side
Brackley Terrace	Canyon Road to Brackley Road	500	Sidewalk on one side
Brackley Road	Brackley Terrace to Cabinwood Drive	700	Sidewalk on one side
US 29	Burnt Mills Avenue to Four Corners Master Plan boundary	1,400+	Both sides of street, connect to existing sidewalk
Wolf Drive	New Hampshire Avenue to Kara Lane	400	Sidewalk on one side
Valley Brook Drive	New Hampshire Avenue to Springbrook High School	2,500	Existing sidewalk on the south side of the street should be improved and extended in front of school
Crosswalk at Jackson Road and New Hampshire Ave			Evaluate relocation to the north side of the intersection along with pedestrian-activated signal
New Hampshire Avenue	Randolph Road to I-495		Existing sidewalks on both sides of the street should be repaired and improved
Crosswalk at Lockwood Drive and US 29			Evaluate location on the north side of intersection
Doncaster Lane	Wendover Road to Montvale Drive	900	Sidewalk in paper street right-of-way
Maple Street	Cannon Road Park to Rosemere Avenue	500	Sidewalk in paper street right-of-way and on west side
Rosemere Avenue	Maple Street to Pine Street	450	Sidewalk on north side
Pine Street	Rosemere Avenue to Winhall Way	800	Sidewalk in paper street right-of-way. May require some boardwalk over wet areas
Naglee Road	Rodney Road to Royal Road	300	Sidewalk in paper street right-of-way
FDA Pedestrian easement	Lockwood Drive to FDA Center (NSWC)	+/- 1,000	New easement across private property

\* The DPW&T, through its sidewalks program, will determine appropriate surface for sidewalk.

## **BIKEWAY NETWORK**

Bikeways are a significant element in the transportation network in the White Oak Master Plan area. They serve a variety of users with different needs. Some recreational routes are used by children as well as adult cyclists. Other bikeways serve commuting cyclists. These bikeways should connect with each other and with bikeways in other parts of the County to be effective. Their design should include safe crossing of major roadways and signs to promote motorist awareness.

Figure 27 on page 64 shows and Table 5 on page 61 lists existing and proposed bikeways in the White Oak Master Plan area. This recommended bikeway network provides a local system within the White Oak Master Plan area and provides connections to the regional network in and through Eastern Montgomery County, with connections to public facilities, metro stations, parks, schools, and commercial areas. Three classes are specified: Class I is a separate off-street path or trail, Class II is an on-street bike lane designated for the exclusive or semi-exclusive use of bicycles, Class III is an on-street route shared by motor vehicles and bicycles and designated by signing only. (A further description of bikeways is in the *Transportation Report for the Eastern Montgomery County Planning Areas.*)

### **OBJECTIVE:**

**Provide safe, convenient, and environmentally sensitive bikeways that connect community centers and services and support a regional bikeway network for community and recreational use.**

### **RECOMMENDATIONS:**

- Designate a Class III bikeway on East Randolph Road between Fairland Road and the Paint Branch Park (PB-20).
- Designate a Class III bikeway along New Hampshire Avenue between the Beltway and Randolph Road (PB-24), with the option of designating a Class I facility between Powder Mill Road and Lockwood Drive, to be determined after further study. This is a change from the 1981 Master Plan which recommended a Class I bikeway through the Naval Surface Warfare Center and an "undefined" Class between US 29 and Randolph Road. North of Randolph Road, the bikeway is proposed for a Class II bike lane (PB-23).
- Designate a Class III bikeway on Locksley Lane between Randolph Road and Westover Elementary School (PB-26).
- Build a Class I bikeway from New Hampshire Avenue along the north side of Jackson Road to connect with the Martin Luther King, Jr. Recreational Park trail (EB-9).
- Provide a Class III bikeway on Powder Mill Road from New Hampshire Avenue to the Prince George's County line (PB-31).
- As part of future development and grade-separation work, provide sufficient right-of-way for a Class III bikeway from New Hampshire Avenue to US 29 through the Milestone Drive properties, and Class II bikeway from north of Stewart Lane interchange with US 29 to Lockwood Drive (PB-27).
- Provide a Class I bikeway along the ICC right of way (PB-32).
- Designate a Class III bikeway on US 29 between Lockwood Drive and the Four Corners Master Plan boundary (PB-6).

# BIKEWAY PLAN

FIGURE 27

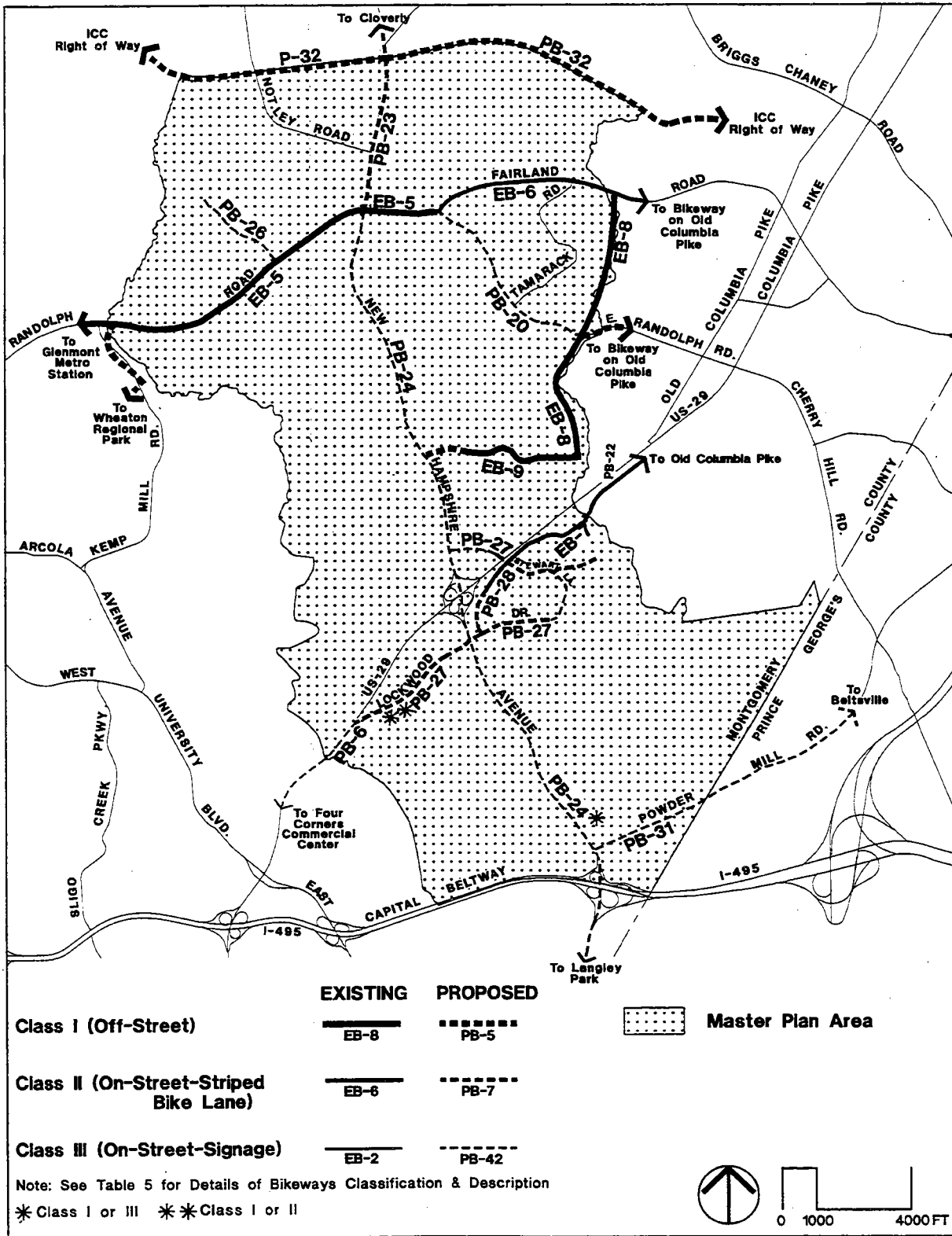


Table 5

BIKEWAYS CLASSIFICATIONS

ROUTE	NAME	LIMIT	CLASS	RECOMMENDATIONS/STATUS
EB-5	Randolph Road	Fairland Road to North-west Branch	I	
PB-20	East Randolph Road	Fairland Road to Paint Branch	III	Programmed
EB-6	Fairland Road	Randolph Road to Paint Branch	II	
EB-7	Old Columbia Pike	White Oak Shopping Center to Paint Branch	II	
EB-8	Paint Branch	Jackson Road to Fairland Road	I	Needs safety measures at crossings of East Randolph Road and Fairland Road
EB-9	Jackson Road	New Hampshire Avenue to existing Paint Branch trail.	I	Proposed between New Hampshire Avenue and Martin Luther King, Jr. Recreational Park on north side of road, existing through park to Paint Branch trail
PB-6	US 29	Northwest Branch to Lockwood Drive	III	Proposed
PB-23	New Hampshire Avenue	Randolph Road to ICC	II	Proposed as part of New Hampshire Avenue widening
PB-24	New Hampshire Avenue	Capital Beltway to Randolph Road	III	Proposed; Class I or III between Powder Mill Road and Lockwood Drive
PB-26	Locksley Lane	Randolph Road to Westover Elementary School	III	Proposed
PB-27	Stewart Lane	New Hampshire Avenue to Lockwood Drive	II, III	Proposed Class III from New Hampshire Avenue to US 29, Class II from north of US 29 interchange to Lockwood Drive.
PB-27	Lockwood Drive	Stewart Lane to US 29	I/II, III	Proposed Class III on Lockwood Drive through White Oak Commercial Center, Class II from Stewart Lane to White Oak Commercial Center, and Class I or II from White Oak Commercial Center to US 29.
PB-28	White Oak Shopping Center	Old Columbia Pike to Lockwood Drive	II	Proposed
PB-31	Powder Mill Road	New Hampshire Avenue to Prince George's County Line	III	Proposed to connect with Prince George's system

ROUTE	NAME	LIMIT	CLASS	RECOMMENDATIONS/STATUS
PB-32	ICC Right-of-Way	Northwest Branch to Paint Branch	I	Proposed, environmental study underway

EB: Existing in the *Master Plan of Bikeways*

PB: Proposed bikeway

\* Bikeways may be provided through developer participation.

- Implement a bikeway sign program within State rights-of-way, similar to the County program

### DELETIONS FROM THE 1981 PLAN

The following items were recommended by the 1981 Plan but are not included in this Master Plan:

- (1) New Road (B-7), New Hampshire Avenue to US 29.
- (2) Proposed Park and Ride Lot, northeast quadrant of US 29/New Hampshire Avenue.
- (3) Springbrook Drive Class III Bikeway (P-51), Northwest Branch to New Hampshire Avenue.
- (4) Naval Surface Weapons Center Access Bikeway (P-7), Capital Beltway to US 29.